

**Amendments to the Claims**

Please cancel Claims 5-9, 11, and 14-16. Please amend Claims 1-4, 10, 12-13, and 17-18. Please add Claims 19-24. The Claim Listing below will replace all prior versions of the claims in the application:

**Claim Listing**

1. (Currently amended) An apparatus for adding and removing liquid reagent to and from a sample comprising:
    - a flat surface supporting the sample;
    - a chamber forming a cavity on said flat surface, said chamber being releasably sealed to said flat surface;
    - a fluid port in the wall of said chamber through which fluids can be added or removed;
    - a valve that is positioned at the fluid port;
    - a conduit capable of opening said valve and through which a source of negative or positive air pressure can be communicated; and
    - an actuator capable of moving the fluid port and conduit relative to each other to engage said conduit and fluid port to each other so that the two are in fluid communication with each other.
  2. (Currently amended) ~~An~~ The apparatus as recited in claim 1 wherein said flat surface is a microscope slide.
  - 3[[,]] . (Currently amended) ~~An~~ The apparatus as recited in claim 1 wherein more than one fluid port is located in the wall of said chamber.
  4. (Currently amended) ~~An~~ The apparatus as recited in claim 3 further comprising a second conduit through which a liquid can be communicated to at least one of said fluid ports.
- 5 – 9. (Canceled)

10. (Currently amended) ~~An~~ The apparatus as recited in claim 1 ~~further comprising wherein the fluid port further comprises a reagent well capable of holding an aliquot of reagent over the fluid port prior to the reagent passing into the cavity.~~
11. (Canceled)
12. (Currently amended) ~~An~~ The apparatus as recited in claim 1 comprising multiple chambers, the chambers and actuator moving relative to each other to position a selected chamber at the actuator.
13. (Currently amended) An apparatus for adding liquid reagent to and from a sample comprising:
  - a flat surface supporting the sample;
  - a chamber forming a cavity on said flat surface, said chamber being releasably sealed to said flat surface; and
  - a fluid port in the wall of said chamber through which fluids can be added, said fluid port further comprising a reagent well capable of holding an aliquot of reagent prior to the reagent passing into the cavity; cavity;
  - a valve that is positioned at the fluid port; and
  - a conduit capable of opening said valve.
14. (Canceled)
15. (Canceled)
16. (Canceled)
17. (Currently amended) ~~An~~ The apparatus as recited in claim 13 comprising plural fluid ports in the wall.

18. (Currently amended) ~~An~~ The apparatus as recited in claim 13 wherein the reagent well is conical and is adapted to seal against a conduit moved into position against the well.
19. (New) An apparatus for adding and removing liquid reagent to and from a sample comprising:
  - a flat surface supporting the sample;
  - a chamber forming a cavity on said flat surface, said chamber being releasably sealed to said flat surface;
  - a fluid port in the wall of said chamber through which fluids can be added or removed;
  - a valve that is positioned at the fluid port;
  - a conduit through which a source of negative or positive air pressure can be communicated;
  - an actuator capable of moving the fluid port and conduit relative to each other to engage said conduit and fluid port to each other so that the two are in fluid communication with each other; and
  - a piston in the conduit capable of opening the valve when the conduit and fluid port are in communication with each other.
20. (New) The apparatus as recited in claim 19 wherein the fluid port further comprises a reagent well capable of holding an aliquot of reagent prior to the reagent passing into the cavity.
21. (New) The apparatus as recited in claim 20 wherein the valve comprises a flexible element below the port.
22. (New) The apparatus as recited in claim 21 wherein the flexible element is an extension of a gasket of the chamber which seals against the flat surface.
23. (New) An apparatus for adding liquid reagent to and from a sample comprising:

- a flat surface supporting the sample;
  - a chamber forming a cavity on said flat surface, said chamber being releasably sealed to said flat surface;
  - a fluid port in the wall of said chamber through which fluids can be added, said fluid port further comprising a reagent well capable of holding an aliquot of reagent prior to the reagent passing into the cavity;
  - a valve that is positioned at the fluid port; and
  - a flexible membrane in said valve below said fluid port, the flexible element being adapted to be opened by a piston extending through the fluid port.
24. (New) The apparatus as recited in claim 23 wherein the flexible element is an extension of a gasket of the chamber which seals against the flat surface.